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ABSTRACT

In an effort to determine why there is continued scarcity of all women and of men of color in the sciences, this study turns the lens of the social sciences onto social aspects of the sciences. Interviews with academic science faculty examined gender and racial/ethnic issues in the professional domain of a variety of scientists for clues as to how the culture of science might influence demographic participation in science programs. As a study of culture with an explicitly sociopolitical agenda, this study adheres most closely to the traditions of Critical Ethnography. Interviews were conducted with 34 practicing scientists sampled demographically across science and applied science fields with respect to sex and racial/ethnic background. The interviewees were half female, half male, half Caucasian, and half people of color (from several ethnic groups). Results indicate that the scientific method and its associated worldview are the most readily identifiable source of the problem of minority representation in the sciences. Scientists believe they can remove subjectivity from their treatment of people, because they are convinced they can do this in their empirical work. Responses, however, in interviews indicate that people in the sciences are not treated equally or equitably. Contains 24 references. (PVD)

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The Myth of Meritocracy and Delusions of Equity: Cultural Impediments to Diversity in Natural Science Programs

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The Persisting Enigma...

The dramatic underrepresentation of all women and men of color in natural science programs remains an unresolved problem in academia. The scientific community is still dominated by white males even after years of targeted scholarship opportunities and affirmative action efforts. There seems to be little recognition that the apparent futility of a multitude of such expensive intervention efforts indicates a deeply rooted problem. Numerous studies tally and document the continued scarcity of all women and men of color in the sciences, but few attempt to go beneath the surface and determine why this situation persists. Given the epistemological traditions of the natural sciences, it is hardly surprising that most of the attention to the demographic distribution of practicing scientists has been of a quantitative nature. We continue to "count heads," confirming what is only too obvious from a quick visual survey of science faculties at almost any research institution. The act of solving problems is central to the scientific process, yet the sciences remain challenged to come up with a solution for an embarrassing situation that spans virtually every subdiscipline. Until we initiate effective lines of research that address and identify the underlying source of the problem, it is unlikely to be improved, much less resolved at any level.

In those rare cases of prior studies that have looked for explanations for patterns of representation in the sciences, there was usually a focus on aptitudes or preparation. The conclusions invariably located critical deficiencies in the students themselves, virtually ignoring the idea that the scientific community plays a crucial role in the situation. Mary Atwater (1994) claims that the problem is not the student and it is time to give up the Student Deficiency Model. It is important to recognize how pedagogy (Tobias, 1990), the climate in classrooms and laboratories (Sadker & Sadker, 1994), and the culture of science itself (Seymour, 1995) can be a deterrent and lead to the loss of high ability participants. This study attempts to move beyond existing research by turning the lens of the social sciences onto the social aspects of the sciences. It has been conducted by a concerned insider, a natural scientist by training, who crosses disciplinary lines out of a profound commitment to educational equity within the profession. The project employs a postmodern/poststructural qualitative methodology in the belief that such a paradigmatic shift is necessary to unravel the degree to which positivism has been used to reify the demographic situation in the sciences. The effort compares and contrasts the views of traditional and nontraditional academic scientists in an effort to better understand how aspects of science culture might contribute to the persistent underrepresentation of all women and men of color in postsecondary science programs.

Strategy for Inquiry...

This research began with the assumption that although differences exist among disciplines and individual scientists, there is a set of common values and behaviors that can be defined as a culture of science. Anthropologists have never agreed on a definition of culture, but Clifford Geertz (1973) suggests expanding on Max Weber's idea that humans are suspended in webs of significance. In science culture, such webs might include: the historical background, its philosophical foundations, sources of authority, methodological practices, use of language, and social relations. Scientists are not a group generally thought of as having culture, but the common past and shared future of science as an organized society demonstrates the applicability of the term (Traweek, 1988). There is little acknowledgement of the degree to which science culture literally mirrors, and in some ways magnifies the social environment in which it takes place. In particular, the extent to which science is influenced by racism and sexism has been ignored, exemplifying the way Margaret Anderson (1993) points out that in any sphere, the nature of race, class, and gender in human relations is not always visible and can be difficult for certain groups to see. Thus, as a study of culture with an explicit sociopolitical agenda, this study adheres most closely to the traditions of Critical Ethnography.

Interviews were conducted with 34 participants who included both demographically traditional (Caucasian male) and nontraditional (all female and non-Caucasian male) practicing scientists. To provide ample disciplinary breadth, there was representation from multiple disciplines within the life and physical sciences, including the applied domains of agriculture and engineering. Purposeful demographic sampling was done across those fields with respect to biological sex and racial/ethnic background. Of the people interviewed, half were male and the other half were female. Comparable numbers of Caucasians and People of Color were included. The People of Color included Americans of African and Asian descent, as well as Latinos and First Nation People. Most of these people are members of the faculty at a single large university, but they grew up and were educated all over the country. Most academic faculty members have been educated in three to five different institutions by the time they complete postdoctoral training, so their histories cover a tremendous number of different institutions. The interviews were shaped to encourage description, explanation, clarification, and evaluation of science and its culture. Interview texts were transcribed verbatim, coded according to a set of structural categories, and systematically organized using a data management software program. Out of this organization, it became obvious that there was a great deal of intersubjective agreement and distinct patterns in the scientists' comments led to the emergence of clear themes from the data.

Emergent Themes...

These interviews with academic science faculty examined gender and racial/ethnic issues in the professional domain of a variety of scientists for clues as to how that culture of science might influence demographic participation in science programs. In relatively unstructured conversations, participants were encouraged to voice their opinions and share stories about their own community. When their narratives were examined intact and clustered into four groups according to sex and dominant/subordinate racial/ethnic status, there were some differences of opinion within categories, but clearly strong common patterns within their realities. Men of color seem to be the most acculturated of the nontraditional groups. Their kinship and ability to affiliate with traditional scientists, as men, is an obvious advantage. Depending on their specific ethnicity, some males can use masculinity more effectively than others to be a part of the center of the community. Being a woman always contextualizes one's position and exerts a negative impact on the professional satisfaction of female scientists. There is a much easier coexistence of white men with white women than exists for women of color. Thus, the people relegated to the furthest margins of the scientific community are women of color. Living at the intersection of the oppression by racial stereotypes and through gender roles, these women are different on both counts, lacking the entry that can be gained with masculine camaraderie or common ethnic heritage. Their stories were the richest sources of information, shedding light on the indignities of racism and sexism that are invisible, but so prevalent in the scientific community.

The opinions and views of individuals from any of these groups of people do not fall into discrete categories, and the power of the data seems to lie in the picture that emerges from a more composite representation of the whole group of people. For the preservation of confidentiality, the source of individual comments was not disclosed, but this blurring of the specific identity categories created a very interesting picture. Decontextualizing the vast collection of comments and subsequently reassembling them according to structural categories and eventually thematic relationships allowed for the construction of a composite representation that literally became an analytic mosaic. By blending their voices and losing most of the individual speaker identifications, a more complete portrait of the complex human side of the sciences emerges. The arrangement of their comments into thematic collections shows a very interesting view of the discourse around marginalization. Among the multiple common threads within the fabric of their testimony, nothing was more striking than the vivid contrast between the views of the nontraditional scientists and their white male counterparts on the subjects of

sexism and racism. The experiences of demographically traditional (white male) scientists differ dramatically from those scientists who are, by virtue of their biological sex and race/ethnicity, nontraditional members of the profession. In what I came to see as a prevalent "fantasy of fairness," I heard over and over how equitable and free of any bias these scientists felt their particular department or field was:

My perception is that there are no problems
The overwhelming impression I have is that there is not much difference in the way people are treated
I think we have removed almost all the obstacles that I can think of that are clearly structural things
Of course I am not living those problems or they are not making those aware to me
I don't see any difference and usually because of my position here, I get the complaints either directly or indirectly
I don't perceive that they have felt especially well treated or especially badly treated
There isn't the complaining during lunch, usually they seem as satisfied as anyone else
There are no barriers now and no barriers at the university level as far as I know
The students that are really good seem to be integrated

Many traditional scientists see the presence of women as an indication that gender issues have been resolved. These white men are particularly confident that sexism has been taken care of:

I don't think we have much to worry about in terms of gender balance
If I hear somebody complaining about a gender issue, I will listen to them,
I HAVE NEVER HAD ANYBODY COMPLAIN ABOUT A GENDER ISSUE, THOUGH
There just simply are enough women in the classes and in the profession, now, they are not so different from everybody else
THERE IS ABSOLUTELY NO DISCRIMINATION AMONG MALE AND FEMALE SCIENTISTS WORKING TOGETHER IN ANY SPECTRUM
I just have so many female colleagues that out of respect for their pure science, I can't see that I could have a bias
The women mix with the men and vice versa, there doesn't seem to be any stigma one way or the other
At least the ways that I do science, it doesn't have anything to do with being trained by men.
You do science according to some kind of approach that is gender non-specific
I think it (science) is pretty gender-free

However, numbers are only part of the story and unless certain imbalances of gender power are reconciled not just in science, but throughout society, apparent gains could be more cosmetic than real for women in science (Harding, 1996). When I challenged the traditional scientists' comfort zone with the testimony that I was hearing from the other side of the coin, I got a variety of explanations. There was the "historic disclaimer," attributing problems to their predecessors or older colleagues who are in the process of retiring and dying off:

In people my age or younger it is greatly reduced, but I don't think it is gone
I know that women of my generation were told that they could not be a scientist by faculty when I was a student
I have known one or two, who are much older, who did regard science as a man's world
IN PEOPLE OLDER THAN ME, I THINK IT IS STILL THERE. IT IS NOT LIKE IT WAS 20-30 YEARS AGO
It depends on what percentage of the faculty are old codgers versus younger people who have less bias
It was basically in my generation where they really kind of broke through, if you will
I have actually heard stories of professors saying, I don't waste my time explaining
things to women because women, because women don't belong in science anyway
I think something that has happened starting about the same age I am and younger,
you'll find pretty significant representation of women

Exclusivity within the scientific community has been maintained through the control of who has access to professional opportunities. The pretense has always been that of an objective process that

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could only result in the selection of the best candidate. The demographic homogeneity of the people chosen has led to a great deal of suspicion on the part of some women and men of color that the process is hardly as fair as it is purported to be. Since scientists cannot reproduce themselves biologically, they can only replicate themselves through the process of whom they allow to train for and eventually join their society. Regulation of membership is carried out through a system that has traditionally encouraged some and excluded others:

They weren't there or they didn't rise to the top because they just didn't have the credentials that the other people did.
Once you get to a certain level the exercise is no longer based on merit,
it is based on who you want to play racquetball with
and if that is the source of our decision making,
the only way to combat it is to mandate we must change
The way people get real jobs is through somebody who knows somebody and this is not through malice. This is just the most reliable indicator about a job candidate, that somebody knows them.
Right now the universities can afford to only hire the best people they can hire
and if the best person happens to be a female, hey, that's great
There is always a concern that that could be what's happening and if you're told you have to go out and hire a minority then you have to get the best person within those constraints and that may not be the best person you could hire overall
To my knowledge in any of the searches that I've been involved in since I've been here there has never been an applicant who was in a minority group with the exception of women, and the women just never surfaced to the top of the bunch because they simply weren't in the discipline that we needed to fill

To others, hiring is widely perceived as the means by which scientists control the demographic composition of the profession. The discourse about hiring practices was as volatile as any issue I discussed with these people. There were very strong feelings with respect to what actually happens in the selection of new hires:

It is back to that comfort, they want people like themselves, so they just tend to bring that out and make points about it
I think there are many, there are some men who would evaluate,
who would scrutinize a woman more closely than a man in terms of qualifications
We always talk about the one candidate who is best qualified, no matter who it is you can always find something that you don't like about them and that could be a valid reason for not hiring them
Something that would not disqualify a man from consideration for a position
or from consideration for joining a lab would disqualify a woman

Cornel West (1993) talks about America's historically weak will toward addressing racial injustice and the need for substantive redistributive measures. He feels that Affirmative Action may not be the most important issue for racial progress, but it certainly is part of a chain that must be strengthened if change is to take place. It is his feeling that racial and sexual discrimination will not be abated through the good will of those in power and it is a mistake to assume the concept of Affirmative Action is no longer needed. Scientists on the margins who are interested in change have suggested:

Maybe that's why we do need affirmative action because what they're going to do is they're going to hire people with whom they feel comfortable and they're going to feel comfortable with some other white guy.
They should be given presumptive priority simply because they are good enough to be here and if they're good enough to be here excluding them has been a sociological question
I think that is the only way to combat this attitude. We are not going to fix the problem

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by mandating affirmative action and forcing the white guy to take on different people
The way the due process should work with something like this you put out a job advertisement.
You go through the applications and create a short list based on the merits of
each person and the kind of research they do and how good they are and
then if there's a woman or minority in that short list they should be hired

Many nontraditional scientists talked about the widespread mythology that they presumably have unfair advantages on the job market:

He called me in and said you know you have been very lucky
and you are going to have a really easy time of it because you
are Black and you are female and you come from a good lab
In fact the most crap that I have ever gotten has been while I was job hunting and that was
from my male peers. That was, you know you are going to get a job because you are a woman
There was a hiring freeze or whatever when you came and we said to our dean here's this – here's this find.
Here's the rare African-American female that's qualified to be on our faculty and because I was such a rare precious find
and they rescinded somehow that hiring freeze to make – to have this precious find on their faculty
When people talk about affirmative action, the one I hear most
deals with a person of lesser quality being given the position
I've heard specifically with respect to recruiting African Americans.
I've heard people say I object to considering this issue because we do not want to
lower our standards. Lowering our standards was not ever in question
We were talking about trying to recruit additional African-Americans but
they equate that with lowering our standards
I'm pretty sure that there are quite a few who still suspect that by getting more
women into the field we're doing the same thing (lowering standards)

In reality, some of those candidates have to be extremely well qualified to even receive consideration:

They tip the scales because they are really strong
If the only acceptable woman walks on water, but the men are down in another category,
then you have always got the story that we interviewed one, but she went some place else
There are probably one or two women out there that are getting every job offer, but they are also really strong
and what is happening is that they are the marriage of two desirables in one candidate
So it is the amazing people who are getting the job offers

There is the impression that some people are more likely representatives of racial/ethnic diversity because the hiring group feels more "comfortable" with them than with members of other groups:

There are minority hires that are made, but I think there are some minorities
that are more what I should say welcome than other minorities
We can have a "Hispanic" hire that is non distinguishable from a
European American, but has Hispanic as a minority label
They could be Native American by some definition,
but they are non-distinguishable from whatever the dominant group is.
Some people are more comfortable with some minorities than others, some minorities might fit in more than others,
and some minorities may blend into the overall population more than others
If we pull all of our minorities and really look at minorities, you would find that some minorities are more representative than others
That group into which they are being hired might be more comfortable with that incoming minority.
This is not to say that the minority that is going in is going to be more comfortable,
it is just the already existing group finds it more comfortable to welcome them in

Any apparent harmony on the surface is not an accurate reflection of the tendency for nontraditional scientists to feel left out of the community to which they are supposed to belong. Since their professional survival depends on maintaining the illusion that they fit in, the prevalent disenchantment was quite a surprise. There were many narratives that emphasized the degree of marginalization the nontraditional scientists felt. These people of color and white women have made sacrifices that are supposed to grant them membership into this professional community. The pain they feel from continued exclusion is evident and they begin to show signs of refusing to invest emotionally in the idea of ever becoming part of the privileged class (Cose, 1993). Disenchantment of this sort is a common consequence of discrimination when people lose faith in the promise of education because the associated promise of success and acceptance is not realized (Grier & Cobbs, 1980). This testimony tends to emphasize how deeply the combination of exclusionary and inclusionary practices can impact intellectual and political practices (Caraway, 1991). Science is a system in which the white man participates visibly in the public sphere. All others are denied access to the associated authority of the dominant society by their distance from the center of activity (Lewis, 1990). Nontraditional scientists may seem to have been absorbed into the system, they might appear to conform to the normative culture, and they might resemble their white male colleagues on the surface, but they are not fully vested in the scientific system. The comments came from people in all three of the groupings of nontraditional scientists, but was most pronounced in women of color who as Audre Lorde (1995) reminds us, are oppressed by both the gender power structure as well as the system of "whiteskin privilege." Isolation seems to neutralize their emotional commitment and the evidence of this appears in the testimony:

I think part of the problems that minorities face is very often
you're not naturally one of the boys and it is an old boy network
There's a difference between something being a novelty and something getting over
that critical mass. So you'll back off of that discomfort level. Just having one or two
others takes the novelty edge off but it still doesn't get you to that comfort level.
I would say more of my female colleagues are unsatisfied than my male colleagues
I can't find people to sit down and talk over issues with

Evelyn Fox Keller (1992) and other scholars point out, that while schemes for classifying people and defining privilege vary across cultures, every group sorts human beings on the basis of biological sex. Respect for gender difference rather than a quest to understand sexism has become the hallmark of postmodern feminism (Gagnier, 1990). Women, regardless of race or ethnicity, find it difficult to feel like an integral part of the picture and most certainly feel different in their scientific professional communities:

I am an associate professor with tenure, but my work was very difficult
and I constantly remind myself why did I think I want to be an academic scientist
We have one of the highest suicide rates of the professions.
They did a study and they wanted to know if we have more cancer
and they found out like 13% of the women's deaths were suicide.
The men didn't have any elevated rate
SHE WAS AN ACKNOWLEDGED RESEARCHER IN THIS AREA AND SHE WOULD SAY SOMETHING.
IT WAS LIKE SHE WAS A GHOST. THEY WOULDN'T HEAR IT. SOMEBODY ELSE WOULD SAY THAT
AND THEN THEY'D START DISCUSSING IT. I'VE HAD THAT HAPPEN TO ME. IT USED TO DRIVE ME CRAZY.
There are different levels of acceptance and I think nominally all the faculty in my department agree that I should be here,
that it is OK for me to be here, but within that there are sort of different undercurrents
The kind of jokes people make, I find tiring
I realized that there are 40 of us, but my professor knows my name immediately,
so I am not going to fit in, I am going to stand out like a sore thumb no matter what happens
There are little subtle things that add up to making it seem impossible to fit in

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I worked really hard on my mental attitude to say nobody is going to make me feel like I do not belong here
What I have backed into is the survival technique. Where you go crazy
is to keep trying to go across that line, be accepted.

People of color can have a more difficult time becoming part of the scientific community. Discrimination has always had an obvious influence on the outcomes of American ethnic groups (Sowell, 1981). There is a certain ambiguity that begins to be a strategy for avoiding the issue of race depending on who is supposed to be distinguishing the diversity or difference (Anzaldua, 1990):

When I was there, there was a class of 25 and there were 2 Blacks.
When we left after 5 years, no other Blacks had been admitted
The few Native American students I interacted with in the classes
didn't seem to appear to be very comfortable
You can't do anything without being noticed and remembered. You have to prove yourself to them
About really all I have in common with my scientist friends is that we do science
If everyone shares an assumption they don't know it's there. So they share all these assumptions
I see this a lot with the attitude towards Chinese people and I see this a lot in the
attitude towards Black people. There are a lot of parallels and I also see this to some degree
in the attitudes to some women, not all women

Sandra Harding (1991) cautions that there is actually a distinct bias against women of color that carries out both a racist and sexist agenda when the special nature of their position is ignored. Explorations of gender almost always center on white women's issues and examinations of race tend to focus on men of color. Studies of diversity have been seriously deficient through the conspicuous absence of women who are both (Uttal, 1990). Race and gender are inseparable for those who live at the intersection of both forms of discrimination. Critical race theorist, bell hooks (1991) talks about a western tradition of a sexist/racist conception of who can be an intellectual, which can easily be applied to the idea of a scientist. The testimony of women of color reveals that it is often difficult for them to decipher whether the discrimination stems from racism or sexism. A woman of color has interests in common with both other women and men of her own race/ethnicity, but she also lives in two simultaneously subordinate positions (Lewis, 1990). She shares a sense of powerlessness with them but lives a reality in which her own situation is compounded by the additive effects of both forms of oppression:

There is a definite hierarchy. There are the white men, there are the white women
and men of color who are about the same, then there are the colored women
It's very easy - if something doesn't go your way or someone treats you in
a certain manner you might try to figure out why that is. I really think that the
woman thing is this easy thing that we fall back on and I don't know if it's always
appropriate. I think maybe one of the things that has helped me in that regard is I can
never really tell what ism is coming into play when I get treated poorly is
it because I'm Asian? Is it because I'm from the west coast?
I think there are quite some barriers to women, more to women than to color which is less of an issue
Actually a Black woman is more scary sometimes than a Black man
Is it a gender issue? Or is it a minority issue? I feel like I go through a double filter of trying to figure out what's going on
There are no Black males in that same category or another Black female where
I can say OK now I observe this to happen in whatever group but not in the other group,
so therefore and by deduction decide whether it was a gender or race issue
For me a lot of times I can't separate the two because I'm representative of both and unless, and this comes back to
scientific inquiry and the need to be careful when one does scientific questions. To me oftentimes I cannot
separate the two or observe which it is because I don't have all of the control groups necessary to do that
It is very difficult to say what is gender and what is race

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A Reasoned Inference...

The scientific method and its associated worldview are what I see as the most readily identifiable source of the problem of representation in the sciences. The "Myth of Meritocracy" is a dangerous delusion that blinds the mainstream scientific community and prevents us from recognizing the fundamental problem in our profession. Scientists believe they can remove subjectivity from their treatment of people because they are convinced they can do this in their empirical work. People in the sciences are not treated equally or equitably. The oppressive nature of the situation conceals itself in the sciences because of the aura of objectivity and premise of value-free activity that are part of what is supposed to be the scientific method. We are so convinced that we can purge subjectivity from our laboratories, we begin to believe we can do the same in our human interactions. Scientists delude ourselves into the belief that we judge people by measures that are as impartial as our laboratory bench techniques, but this is far from the case.

Ann Fausto-Sterling (1985) points out that it is very hard for members of a society that pictures itself to be just and impartial to see discrimination. In the sciences, where value-neutrality (Proctor, 1991) is such a delusional belief it seems very difficult to accept the idea that anything other than a meritocracy is in place. Such attitudes are rather typical of a vocal commitment to equalitarian principles that sits in stark contrast to great inconsistencies in the process of application. Disparities like this indicate the importance of implementation of measures to reduce the discrepancy between organizational principles (Schuman, Steeh, & Bobo, 1985) of the university that espouse diversity and the reality of the setting that works against any change. Even more so, it argues for creating some understanding and awareness of the perceptions of the marginalized, which do not support the dominant group's analysis of the situation. The startling contrast came in the testimony of the members of the dominant group of scientists, the white men. The testimony by all women, and men of color about the limits of acculturation or not fitting in stands in startling contrast to the pronouncements of their white male colleagues who make up the majority population. This profound discrepancy also seems to yield important clues as to the underlying reasons some people never quite feel part of the inner circle and their colleague's almost complete failure to understand this.

Representation in scientific communities continues to be determined by practices that replicate the demographics of the existing population. Traditional scientists select their proteges as students, selectively nurture their growth and academic development through various stages of postsecondary education, and eventually assist them in moving to the professional level. Other scientists choose new colleagues from an applicant pool that was determined by who was recruited and aided through the first part of the process. Eventually, permanence comes with the tenure that is granted when one satisfactorily negotiates initiation rituals and proves themselves to be worthy members of the community. Contrary to general belief, none of the phases of these selection steps are objective and value-free.

Science is a social enterprise with human dimensions that give racial/ethnic and gender issues a great deal of influence over people's experiences throughout the cycling process that connects science education and the professional scientific community. Parallels between the scientific professions and the educational system are not coincidental. They are the consequence of the ways in which these two communities feed each other in a reciprocal manner. Starting arbitrarily at the earliest stage of science exposure for the young child, the images of science create the impression of a world populated by one group of people. Preferential encouragement is given throughout the educational process that increases the likelihood of members of that same demographic group having the experiences that enable them to join that group. When they reach the gates of science they are given preferential treatment that

increases their chances of survival and success. As they become the established scientists they perpetuate the representation by following precedent practices that ensure the status quo. Discrimination has not been purged from the professional or educational dimensions of the sciences; it has just been moved from its former explicit manifestation to a less visible and more insidious location where we can delude ourselves into believing it has been eradicated.

There is a standing delusion that attitudes and practices have changed enough that the doors are open to any and all potential participants. This fallacious reasoning allows the dominant members to attribute disproportionate representation to outside factors rather than take responsibility for the existing situation. Any sense of frustration with the state of affairs tends to lead to the creation of external excuses for such a demographically homogenous profession. Science must start "to look in a mirror" and examine the role our own culture plays in the dilemma. Science will only begin to remove the serious existing impediments to gender and racial/ethnic diversity when we explore the social dimensions of our own profession and how they impact the nontraditional members of our community. It seems fairly clear that a fundamental failure to understand the problem and ignorance of the root cause contribute to its stubborn persistence.

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